



Three years of results from a mooring over a *Posidonia Oceanica* seagrass meadow (Corsica, France)

Willy Champenois (1), Bruno Delille (1), Gilles Lepoint (2), Jean-Marie Beckers (3), Marilaure Grégoire (2), and Borges Alberto V. (1)

(1) Chemical Oceanography Unit, University of Liège, Liège, Belgium (alberto.borges@ulg.ac.be), (2) Laboratory of Oceanology, University of Liège, Liège, Belgium, (3) Laboratory of Physical Oceanography, University of Liège, Liège, Belgium

We report the first three years of results from a 10m deep mooring over a *Posidonia Oceanica* seagrass meadow (Corsica, France) where we deployed from August 2006 to November 2009 an array of 3 optodes. The oxygen data are used to compute by mass balance ecosystem metabolic performance rates (gross primary production (GPP), community respiration (CR), net community production (NCP)), allowing a detailed analysis of seasonal and year-to-year variability of GPP, CR and NCP. The comparison of GPP and CR values derived from the O₂ mass balance with rates derived from discrete benthic incubations (every 2 months in 2006-2007, every 4 months in 2008-2009) is very satisfactory. An application of such a mooring is to detect changes in the productivity of the *Posidonia* meadow that can be used as indicators of overall ecosystem “health” or degradation by human activities. Such a mooring can be used as an affordable and simple tool for management and sustainable development of coastal areas in the Mediterranean.